

Mark Version of Amended Claims

1. (Amended) A putter head assembly, comprising:

a putter body having a toe end, a heel end and a face surface that extends from said heel end toward said toe end, wherein said face surface has a loft angle configuration that continuously varies from a positive loft angle to a negative loft angle as said face surface extends from [between]said heel end [and] toward said toe end;

a non-metallic insert disposed in at least a portion of said face surface, wherein said non-metallic insert conforms to the loft angle configuration of said face surface.

2. The assembly according to Claim 1, wherein said face surface has a mid-line that extends along the center of said face surface between said heel end and said toe end.

4.(Amended) The assembly according to Claim [3] 2, wherein said mid-line of said face surface follows a curve having a radius of curvature between 54 inches and 90 inches.

5. The assembly according to Claim 2, wherein said non-metallic insert has a varying thickness along said mid-line and varies as a function of position along said mid-line.

7.(Amended) The assembly according to Claim [6] 1, wherein said positive loft angle is ten degrees.

8.(Amended) The assembly according to Claim 3, wherein said non-metallic insert has a front surface [that conforms to said loft angle configuration] and an opposite rear surface

[that does not conform] wherein said front surface conforms to said loft angle configuration.

10. The assembly according to Claim 8, wherein said rear surface has a plurality of sections and each of said sections has its own radius of curvature.

11. (Amended) A putter, comprising:

a shaft having a first end and a second end;

a handle grip coupled to said first end of said shaft;

a putter head coupled to said second end of said shaft, said putter head including a face surface having a toe end and a heel end, said face surface being symmetrically disposed around an imaginary mid-line that extends from said toe end to said heel end, wherein said face surface [is twisted about said mid-line creating] has a loft angle configuration that continuously varies between said toe end and said heel end;

a non-metallic insert disposed in at least a portion of said face surface, wherein said non-metallic insert conforms to the loft angle configuration of said face surface.

12. The putter according to Claim 11, wherein said mid-line follows a curve having a radius of curvature between 54 inches and 90 inches.

13.(Amended) The putter according to Claim 11, wherein said non-metallic insert has a front surface [that conforms to said loft angle configuration] and an opposite rear surface, wherein said front surface conforms [that does not conform] to said loft angle configuration.

15.(Amended) The putter according to Claim [8] 13, wherein said rear surface has a plurality of sections and each of said sections has its own radius of curvature.

16. The putter according to Claim 11, wherein said non-metallic insert has a thickness that varies along said mid-line as a function of position on said mid-line.

[15] 17.(Amended) A golf club striking surface comprising:

a contact face having a first end, a second end and an imaginary mid-line that runs down the center of said contact face between said first end and said second end, wherein said mid-line follows a curved path, having a predetermined radius of curvature, and said contact face [is twisted around said mid-line] has a loft angle configuration that continuously varies between said first end and said second end ;

an insert disposed within said contact face, wherein said non-metallic insert has a thickness along said mid-line that varies as a function of position on said mid-line.

[16] 18.(Amended) The striking surface according to Claim [15] 17, wherein said insert has a front surface [that conforms to said contact face] and an opposite rear surface [that does not conform] ,wherein said front surface conforms to said contact face.

[18] 20.(Amended) The striking surface according to Claim [17] 18, wherein said rear surface has a plurality of sections and each of said sections has its own radius of curvature.

[19] 21.(Amended) The striking surface according to Claim [16] 18, wherein said rear surface follows different curves in different sections, wherein each of said curves has a different origin of curvature.

[20] 22.(Amended) The striking surface according to Claim [15] 17, wherein said insert is fabricated from an elastomeric material having a "A" Shore value of between 90 and 95.

REMARKS

Claims 1 - 22 were pending in this application.

Claims 1-22 were rejected.

Claims 1, 4, 7, 8, 11, 13, 15 and 17-22 are rejected.

Claims 3, 6, 9 and 14 are amended.

I. 35 USC 112 Rejections

The Examiner has objected to the wording of Claims 2-4 and 6-22 under 35 USC 112, second paragraph. The effected claims have been amended to eliminate the point of contention. All pending claims are now believed to stand in proper form under 35 USC 112.

In regard to Claim 4, and 12, the Examiner states that the radius of curvature is believed to being the bulge of the striking face. This is correct. The striking face, as stated in Claim 4 and Claim 12, is curved with the stated radius of curvature. The radius of curvature is for the mid-line of the striking face. Thus, the point of measurement for the radius of curvature would be in the same plane as the mid-line.

II. 35 USC 103(a) Rejections

The Examiner has rejected Claims 1-9, 11-14, 16-19 and 22 under 35 USC 103(a) as being unpatentable over U.S. Patent No. 5,505,450 to Stuff in view of U.S. Patent No. 5,322,285 to Turner.

The claims of the present application contain three independent claims, which are Claim 1, Claim 11 and Claim 17. Each of these claims is distinguishable over the cited combination of references as is explained below.

Claim 1

Claim 1 sets forth a putter head assembly. The assembly has a putter body with a toe

end, a heel end and a face surface that extends from the heel end toward the toe end. The face surface has a loft angle configuration that continuously varies from a positive loft angle to a negative loft angle as the face surface extends between the heel end and the toe end.

A non-metallic insert is disposed in at least a portion of the face surface, wherein said non-metallic insert conforms to the loft angle configuration of said face surface.

This claimed configuration is not disclosed or suggested by the cited prior art, as explained below.

The Stuff patent shows a golf club having a non-metallic insert on its striking face. However, the striking face only has one consistent loft angle.

The Turner patent shows a golf club having three distinct sections on the striking face. Each of the three different sections has a different loft angle that is consistent throughout that section. The golf club shown in the Turner patent is illegal under the USGA rules because the club has more than one distinct striking surface.

The present invention claims a golf club, where the striking face of the golf club has a loft angle that consistently varies from a positive loft angle to a negative loft angle as the striking face advances from its heel end to its toe end. The non-metal insert conforms to this unique changing loft angle configuration. The claimed golf club presents only one distinct striking surface, that happens to have a changing loft angle. As such, the present invention golf club is legal under USGA rules.

In combination, neither the Stuff patent nor the Turner patent disclose any golf club where the loft angle consistently changes along the striking face from the heel of the striking face to the toe of the striking face. Since this matter is specifically contained in Claim 1, it is clear that the combination of the Striker and Turner patents fails to disclose the matter

contained in Claim 1 or its dependent claims. The Examiner is therefore requested to withdraw the 35 USC 103 rejection as they apply to Claim 1 and its dependent claims.

In regard to Claim 4, it is stated that not only does the striking face of the golf club have a changing loft angle, the striking face is also curved. More specifically, the mid-line of the striking face has a radius of curvature within a certain range.

Neither the Striker patent nor the Turner patent disclose or suggest a golf club with a striking face that has a changing loft angle and is also curved.

Claim 11

Claim 11 sets forth a putter. The putter has a putter head. The putter head has a face surface with loft angle configuration that continuously varies from the toe end of the face surface to the heel end of the face surface. Furthermore, a non-metallic insert is disposed in at least a portion of the face surface, wherein the non-metallic insert conforms to the loft angle configuration of the face surface.

As has been previously mentioned, neither the Stuff patent nor the Turner patent disclose any golf club where the loft angle consistently changes along the striking face from the heel of the striking face to the toe of the striking face. Since this matter is specifically contained in Claim 11, it is clear that the combination of the Striker and Turner patents fails to disclose the matter contained in Claim 11 or its dependent claims. The Examiner is therefore requested to withdraw the 35 USC 103 rejection as they apply to Claim 11 and its dependent claims.

In regard to Claim 12, it is stated that not only does the striking face of the golf club have a changing loft angle, the striking face is also curved. More specifically, the mid-line of

the striking face has a radius of curvature within a certain range.

Neither the Striker patent nor the Turner patent disclose or suggest a golf club with a striking face that has a changing loft angle and is also curved.

Claim 17

Claim 17 sets forth a golf club striking surface. The contact face of the striking surface has a mid-line that follows a curved path. In addition to being curved, the contact face of the striking surface has a loft angle configuration that continuously varies between the two opposite ends of the contact face.

The claimed club striking face also contains a non-metallic insert that has thickness along the mid-line that varies as a function of position on the mid-line.

Neither the Stuff patent nor the Turner patent disclose any golf club where the loft angle consistently changes along the striking face from the heel of the striking face to the toe of the striking face. Furthermore, neither the Striker patent nor the Turner patent disclose or suggest a golf club with a striking face that has a changing loft angle and is also curved. Since this matter is specifically contained in Claim 17, it is clear that the combination of the Striker and Turner patents fails to disclose the matter contained in Claim 17 or its dependent claims. The Examiner is therefore requested to withdraw the 35 USC 103 rejection as they apply to Claim 17 and its dependent claims.

The Examiner has rejected Claims 10, 15 and 20-21 under 35 USC 103(a) as being unpatentable over U.S. Patent No. 5,505,450 to Stuff in view of U.S. Patent No. 5,322,285 to Turner, U.S. Patent No. 5,310,185 to Viollaz and U.S. Patent No. 6,319,150 to Werner.

Claim 10 depends from Claim 1. Claim 15 depends from Claim 11. Claims 20 and 21 depend from Claim 17. Claims 1, 11 and 17 are distinguishable over the Turner and Stuff patents for the reasons previously presented. The newly added Viollaz patent and the Werner patent only disclose various inserts for golf club faces. Neither reference discloses a golf-club face with a changing loft angle. Accordingly, when combined none of the cited patents discloses a golf club face having a loft angle that consistently changes from one end of the face to the other. Since this matter is specifically contained in all independent claims, Claims 10, 15 and 20-21 are believed to be allowable since they depend from and further define allowable base claims. The Examiner is therefore requested to withdraw the 35 USC 103 rejections as they apply to Claim 10, Claim 15, Claim 20 and Claim 21.

The Examiner's rejection based upon the cited references requires a selective combination of various elements before the references can be applied to the pending claims. The law is clear. When prior art references require selective combination to render the claims of an application obvious, there must be some reason for the combination other than hindsight gleaned from the invention itself. See *Interconnect Planning Corp. v. Feil* 774 F.2nd 1138, 227 USPQ 543 (Fed Cir 1985), and *Ashland Oil, Inc.* 776 F.2nd 281, 227 USPQ 657 (Fed Cir 1985). Something in the prior art as a whole must suggest the desirability and thus the obviousness of making the combination. See *Lindermann Maschinenfabik GmbH v. American Hoist and Derrick Co.* 730 F.2nd 1452, 221 USPQ 481 (Fed Cir. 1984), and *Uniroyal Inc. v. Rudkin-Wiley Corp.* 5 USPQ 2nd 1434 (1988).

As the court stated in *Uniroyal*, 837 F.2nd at 1051, 5 USPQ2nd at 1438, "it is impermissible to use the claims as a frame and the prior art references as a mosaic to piece together a facsimile of the claimed invention." In regard to the matter set forth in Claims 1, 11

and 17, the prior art cited simply does not disclose any golf club face with a constantly changing loft angle. Since nothing in the cited art suggests what was claimed, the Examiner's combination is without motivation and is wrongful hindsight reconstruction.

III. DRAWINGS

The Official Draftsman's objections to the drawings have been noted. Formal drawings will be filed upon receipt of the Notice of Allowance for this application.

IV. SUMMARY

Having fully distinguished the pending claims over the cited art, this application is believed to stand in condition for allowance. However, if the Examiner is of the opinion that such action cannot be taken, the Examiner is requested to call the applicant's attorney at (215) 321-6772 in order that any outstanding issues may be resolved without the necessity of issuing a further Office Action.

Respectfully Submitted,



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